



# Disaster Housing

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The recent tsunami brought on several challenges to the provision of immediate shelter and sanitation to displaced populations. Tent structures and variations of this system were used as military field clinics and for setting up camp in safer locations in the first phase of relief operations.

In Aceh, North Sumatra, the tent accommodation quickly proved to be unbearable for the displaced people and the government has quickly begun building temporary housing in the form of communal barracks. At a space standard of one person to 3.5 sq meters, 300 to 500 people are allocated about 0.9 hA of land in communes called relocation centres. The people are to be relocated to these centres from the tent camps two months after the tsunami struck.

Because the communes are expected to last no more than two years, their building is primarily in timber frame with outhouses for cooking, bathing and WCs. Only septic tanks are used and refuse is placed in a pit dug into the ground. Water supply is primarily borehole in areas where there are no streams.

The need to consider the environmental impact of building several of such communes in a short span of time is imperative. The consideration of making daily life less of a compromise in temporary communes is essential when the two year deadline is not confirmed under any circumstances.

It is proposed that a form of commune housing to accommodate disaster displaced people be conceived as a quick assembly and dismantler kit which can be readily deployed and assembled in a period of time that is delayed by:

- (a) sourcing building material in areas where they are scarce
- (b) lack of construction expertise and standards of implementation
- (c) controlling quality of product in building process
- (d) pricing negotiations
- (e) locating suitably located and sized plots
- (f) transportation of building material

Waste management control and water purification systems are to be integrated in the planning to minimise the amount of land required by the commune and its environmental impact in terms of water and soil contamination.

Most importantly, the systems are to adapt to a variety of site conditions, a range of user requirements and social structures, and be low maintenance and affordable to sponsors. They have to be developed to respond to the need for quick deployment where conventional construction methods are inappropriate, and where they are inadequate to minimize negative environmental impacts.

